

WHAT IS CLAIMED IS:

- 1                   1.       A method of inhibiting programmed cell death in a maize plant  
2       comprising introducing a construct comprising a programmed cell death inducible promoter  
3       operably linked to a nucleotide sequence that inhibits programmed cell death into said plant,  
4       whereby programmed cell death in the lower floret of said plant is inhibited.
- 1                   2.       The method of claim 1, wherein the nucleotide sequence encodes a  
2       plant growth regulator synthesizing enzyme.
- 1                   3.       The method of claim 2, wherein the enzyme catalyzes the synthesis of  
2       cytokinin.
- 1                   4.       The method of claim 3, wherein the enzyme is isopentenyl transferase.
- 1                   5.       The method of claim 1, wherein the programmed cell death inducible  
2       promoter is SAG12.
- 1                   6.       The method of claim 5, wherein the SAG12 promoter is from  
2       *Arabidopsis thaliana*.
- 1                   7.       The method of claim 6, wherein the SAG12 promoter is 70% identical  
2       to SEQ ID NO:1.
- 1                   8.       The method of claim 1, further comprising detecting increased levels  
2       of protein within said plant.
- 1                   9.       The method of claim 1, further comprising detecting increased levels  
2       of oil within said plant.
- 1                   10.      The method of claim 1, further comprising detecting increased levels  
2       of oil and protein within said plant.
- 1                   11.      The method of claim 1, further comprising detecting the presence of a  
2       kernel having multiple embryos.
- 1                   12.      The method of claim 1, wherein the construct is introduced by a type  
2       of sexual cross.

- 1                   13.     The method of claim 1, wherein the construct is introduced by  
2     transformation.
- 1                   14.     A transgenic maize plant comprising an expression cassette comprising  
2     a programmed cell death -inducible promoter operably linked to a nucleotide sequence  
3     encoding an inhibitor of programmed cell death, the maize plant having kernels with multiple  
4     embryos.
- 1                   15.     The transgenic plant of claim 14, wherein the nucleotide sequence  
2     encodes a plant growth regulator synthesizing enzyme.
- 1                   16.     The transgenic plant of claim 15, wherein the enzyme catalyzes the  
2     synthesis of cytokinin.
- 1                   17.     The transgenic plant of claim 16, wherein the enzyme is isopentenyl  
2     transferase.
- 1                   18.     The transgenic plant of claim 14, wherein the programmed cell death  
2     inducible promoter is SAG12.
- 1                   19.     A kernel from a transgenic maize plant comprising multiple embryos,  
2     wherein the kernel has increased oil and protein content.
- 1                   20.     A method of inhibiting programmed cell death in a maize plant  
2     comprising introducing a promoter from a floret specific gene operably linked to a nucleotide  
3     sequence that inhibits programmed cell death into said plant, whereby programmed cell death  
4     in the lower floret of said plant is inhibited.
- 1                   21.     The method of claim 20, wherein the floret specific gene is associated  
2     with programmed cell death.
- 1                   22.     The method of claim 20, wherein the floret specific gene is not  
2     associated with programmed cell death
- 1                   23.     The method of claim 20, wherein the nucleotide sequence encodes a  
2     plant growth regulator synthesizing enzyme.

1 24. The method of claim 23, wherein the enzyme catalyzes the synthesis of  
2 cytokinin.

1 25. The method of claim 24, wherein the enzyme is isopentenyl  
2 transferase.

1 26. The method of claim 20, further comprising detecting increased levels  
2 of oil and protein within said plant.

1 27. The method of claim 20, further comprising detecting the presence of a  
2 kernel having multiple embryos.

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